

Amendments To the Claims

Claim 1 (Currently amended): A method of analyzing multiple samples simultaneously by absorption detection, in the absence of a mask or slit which method comprises:

- (i) providing a planar array of multiple containers, each of which contains a sample comprising at least one absorbing species,
- (ii) irradiating the planar array of multiple containers with a light source comprising at least one wavelength of light that is absorbed by one or more of said at least one absorbing species, the absorption of which is to be detected, and
- (iii) detecting absorption of light by the one or more of said at least one absorbing species with a detection means that is in line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance of at least about 10 times a cross-sectional distance of a container in said planar array of multiple containers measured orthogonally to the plane of the planar array of multiple containers ~~in the absence of a mask or slit~~,

wherein the detection of absorption of light by a sample in the planar array of multiple containers indicates the presence of an absorbing species in said sample.

Claim 2 (Original): The method of claim 1, which further comprises (iv) measuring the amount of absorption of light detected in (iii) for an absorbing species in a sample, wherein the measurement of the amount of absorption of light detected in (iii) indicates the amount of the absorbing species in the sample.

Claim 3 (Original): The method of claim 1, wherein the distance is from about 10 cm to about 50 cm.

Claim 4 (Original): The method of claim 1, wherein said planar array of multiple containers comprises capillary tubes.

Claim 5 (Original): The method of claim 4, wherein the distance is at least about 10 times the diameter of a capillary tube.

Claim 6 (Original): The method of claim 4, wherein said planar array of multiple containers comprises at least about 10 capillary tubes.

Claim 7 (Original): The method of claim 6, wherein said planar array of multiple containers comprises at least about 90 capillary tubes.

Claim 8 (Original): The method of claim 1, wherein said planar array further comprises at least one control container.

Claim 9 (Original): The method of claim 1, wherein said detection means comprises a plurality of photosensitive elements in a photodiode array.

Claim 10 (Previously presented): The method of claim 9, wherein said photodiode array comprises linearly aligned pixels.

Claim 11 (Original): The method of claim 10, wherein each container in said planar array of multiple containers is a capillary tube and each capillary tube is optically coupled to less than about ten pixels.

Claim 12 (Original): The method of claim 1, wherein the light source comprises or consists essentially of a wavelength in the range from about 180 nm to about 1500 nm.

Claim 13 (Original): The method of claim 12, wherein the light source has a power output of about 0.5 mW to about 50 mW.

Claim 14 (Previously presented): The method of claim 1, wherein an optical filter is positioned between said planar array of multiple containers and said detection means, wherein said optical filter selects at least one wavelength of light from said light source.

Claim 15 (Original): The method of claim 14, wherein a flat-field lens is positioned between said planar array of multiple containers and said detection means, wherein said flat-field lens couples light that is not absorbed by the one or more of said at least one absorbing species in each sample in the planar array of multiple containers with the detection means.

Claim 16 (Canceled)

Claim 17 (Original): The method of claim 4, wherein the detection limit for rhodamine 6G for each capillary in the planar array of multiple containers is about 1.8×10^{-8} M.

Claim 18 (Original): The method of claim 4, wherein the cross-talk between adjacent capillaries is less than about 0.2%.

Claim 19 (Original): The method of claim 17, wherein the cross-talk between adjacent capillaries is less than about 0.2%.

Claim 20 (Canceled)

Claim 21 (Original): The method of claim 1, wherein a beam expander is positioned between said light source and said planar array of multiple containers.

Claim 22 (Original): The method of claim 1, wherein a collimating focusing lens is positioned between said light source and said planar array of multiple containers.

Claim 23 (Previously presented): A system for use in analyzing multiple samples simultaneously by absorption detection, which system comprises in the absence of a mask or slit:

- (i) a light source comprising or consisting essentially of at least one wavelength of light that is absorbed by one or more absorbing species, the absorption of which is to be detected,
- (ii) a planar array of multiple containers, into each of which can be placed a sample comprising at least one absorbing species, and
- (iii) a detection means that is in line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance of at least about 10 times a cross-sectional distance of a container in said planar array of multiple containers measured orthogonally to the plane of the planar array of multiple containers.

Claim 24 (Original): The system of claim 23, wherein the distance is from about 10 cm to about 50 cm.

Claim 25 (Original): The system of claim 23, wherein said planar array of multiple containers comprises capillary tubes.

Claim 26 (Original): The system of claim 25, wherein the distance is at least about 10 times the diameter of a capillary tube.

Claim 27 (Original): The system of claim 25, wherein said planar array of multiple containers comprises at least about 10 capillary tubes.

Claim 28 (Original): The system of claim 27, wherein said planar array of multiple containers comprises at least about 90 capillary tubes.

Claim 29 (Original): The system of claim 23, wherein said planar array further comprises at least one control container.

Claim 30 (Original): The system of claim 23, wherein said detection means comprises a plurality of photosensitive elements in a photodiode array.

Claim 31 (Original): The system of claim 30, wherein said photodiode array comprises linearly aligned pixels.

Claim 32 (Original): The system of claim 31, wherein each container in said planar array of multiple containers is a capillary tube and each capillary tube is optically coupled to less than about ten pixels.

Claim 33 (Original): The system of claim 23, wherein the light source comprises or consists essentially of a wavelength in the range from about 180 nm to about 1500 nm.

Claim 34 (Original): The system of claim 33, wherein the light source has a power output of about 0.5 mW to about 50 mW.

Claim 35 (Previously presented): The system of claim 23, which further comprises an optical filter between said planar array of multiple containers and said detection means, wherein said optical filter selects at least one wavelength of light from said light source.

Claim 36 (Original): The system of claim 35, which further comprises a flat-field lens between said planar array of multiple containers and said detection means, wherein said flat-field lens couples light that is not absorbed by the one or more of said at least one absorbing species in each sample in the planar array of multiple containers with the detection means.

Claim 37 (Canceled)

Claim 38 (Original): The system of claim 25, wherein the detection limit for rhodamine 6G for each capillary in the planar array of multiple containers is about 1.8×10^{-8} M.

Claim 39 (Original): The system of claim 25, wherein the cross-talk between adjacent capillaries is less than about 0.2%.

Claim 40 (Original): The system of claim 38, wherein the cross-talk between adjacent capillaries is less than about 0.2%.

Claim 41 (Original): The system of claim 25, which further comprises a means to introduce said sample into said capillary tube.

Claim 42 (Original): The system of claim 41, wherein said sample is introduced into said capillary tube by pressure, gravity, vacuum, capillary or electrophoretic action.

Claim 43 (Original): The system of claim 23, which further comprises a beam expander between said light source and said planar array of multiple containers.

Claim 44 (Original): The system of claim 23, which further comprises a collimating focusing lens between said light source and said planar array of multiple containers.

Claim 45 (Previously presented): The method of claim 11, wherein an optional filter is positioned between said planar array of multiple containers and said detection means, wherein said optical filter selects at least one wavelength of light from said light source.

Claim 46 (Previously presented): The method of claim 45, wherein a flat-field lens is positioned between said planar array of multiple containers and said detection means, wherein said flat-field lens couples light that is not absorbed by the one or more of said at least one absorbing species in each sample in the planar array of multiple containers with the detection means.

Claim 47 (Canceled)

Claim 48 (Previously presented): The system of claim 32, which further comprises an optical filter between said planar array of multiple containers and said detection means, wherein said optical filter selects at least one wavelength of light from said light source.

Claim 49 (Previously presented): The system of claim 48, which further comprises a flat-field lens between said planar array of multiple containers and said detection means, wherein said flat-field lens couples light that is not absorbed by the one or more of said at least one absorbing species in each sample in the planar array of multiple containers with the detection means.

Claim 50 (Canceled)

Claim 51 (Currently amended): A method of analyzing multiple samples simultaneously by absorption detection in the absence of a mask, or slit or spacer, which method comprises:

- (i) providing a planar array of multiple containers, each of which contains a sample comprising at least one absorbing species,
- (ii) irradiating the planar array of multiple containers with a light source comprising at least one wavelength of light that is absorbed by one or more of said at least one absorbing species, the absorption of which is to be detected, and
- (iii) detecting absorption of light by one or more of said at least one absorbing species with a detection means that is in line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance such that the light impinging upon the detection means is substantially only that which is transmitted through the multiple containers of at least about 10 times a cross-sectional distance of a container in said planar array of multiple containers measured orthogonally to the to the plane of the planar array of multiple containers,

wherein the detection of absorption of light by a sample in the planar array of multiple containers indicates the presence of an absorbing species in said sample.

52. (Currently amended) A method of analyzing multiple samples simultaneously by absorption detection in the absence of a mask, or slit or spacer, which method comprises:

- (i) providing a planar array of multiple containers, each of which contains a sample comprising at least one absorbing species,
- (ii) irradiating the planar array of multiple containers with a light source comprising at least one wavelength of light that is absorbed by one or more of said at least one absorbing species, the absorption of which is to be detected, and
- (iii) detecting absorption of light by one or more of said at least one absorbing species with a detection means that is line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance ~~such that the stray light is less than about 1% of at least about 100 times a cross-sectional distance of a container in said planar array of multiple containers measured orthogonally to the to the plane of the planar array of multiple containers,~~

wherein the detection of absorption of light by a sample in the planar array of multiple containers indicates the presence of an absorbing species in said sample.

claim 53. (Currently amended) A method of analyzing multiple samples simultaneously by absorption detection in the absence of a mask, or slit or spacer, which method comprises:

- (i) providing a planar array of multiple containers, each of which contains a sample comprising at least one absorbing species,
- (ii) irradiating the planar array of multiple containers with a light source comprising at least one wavelength of light that is absorbed by one or more of said at least one absorbing species, the absorption of which is to be detected, and
- (iii) detecting absorption of light by one or more of said at least one absorbing species with a detection means that is line with the light source and is positioned in line with and parallel to the planar array of multiple containers at a distance ~~such that stray light exiting the planar array of multiple containers disperses prior to impinging upon the detection means so that the light impinging upon the detection means is substantially only that which is transmitted through said multiple containers of from about 1 cm to about 30 cm,~~

wherein the detection of absorption of light by a sample in the planar array of multiple containers indicates the presence of an absorbing species in said sample.

Claim 54 (Previously presented): The system of claim 4, which further comprises a means to introduce said sample into said capillary tube.

Claim 55 (Previously presented): The method of claim 54, wherein said sample is introduced into said capillary tube by pressure, gravity, vacuum, capillary or electrophoretic action.